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ABSTRACT

A small team of teachers and administrators at Boonsboro Middle School (Maryland) planned staff development activities for the implementation of a networked laboratory of 32 computers. Primary concerns were educating faculty members to develop computer awareness, select and evaluate appropriate software applications, and use computers as tools to support instruction. For the first year the project focused on using word processing to encourage writing activity in content areas. A core group of 10 teachers representing all curricular areas met in a 4-day workshop to establish goals for computer use, learn how the system operated, examine software, and develop word processing activities. This group became teacher-trainers for other faculty. Staff development activities were planned when new software became available for preview, when faculty needed time to plan curriculum using newly installed software, or when faculty were introduced to methods for integrating computer use into their content area curricula. By the end of the second year of the project, over half the faculty (17 teachers) were regular computer users with some of their classes and over three-quarters of the faculty (25 teachers) were occasional users. (MES)

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CREATING A COMPUTER-USING SECONDARY SCHOOL FACULTY THROUGH STAFF DEVELOPMENT

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When the Maryland State Department of Education announced that Boonsboro Middle School would be one of five sites to receive a networked laboratory of thirty-two computers for instructional use, a small team of faculty and administrators had already begun to plan for it. Their primary concerns for the lab's success were educating faculty members 1) to develop computer awareness, 2) to select and evaluate appropriate software applications, and 3) to use computers as tools to support instruction. The school's staff development plan focused on these three concerns. The underlying assumption? The lab's success depended on providing faculty members with the time and support necessary to use new technology to enhance the curriculum.

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The only networkable software available for the lab during the first year was a word processing program and a keyboarding program. As a result of this limitation, the school's first-year project would focus on using word processing to encourage writing activity in content areas. During subsequent years, specific content area software would be added.

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Staff development began with a core group of ten teachers representing all curricular areas in the school. These teachers met in a four-day workshop prior to the lab's installation. First, they established short- and long-term goals for computer use. Short-term goals included teaching all students fundamental keyboarding and word processing skills, then applying those skills to content-area writing assignments. One long-term goal involved developing a program for writing in content areas using computers as tools to facilitate the process. Another specified that the school's priorities for content-area software would emphasize basic skills development for slower learners, then thinking skills development for gifted students, then a general collection of programs for all students and all subject areas.

Next, the core group learned how the new computer system operated. Not only did they adjust to a different brand of computer system (IBM PCjrs vs. familiar Apple IIes), they began to learn of the advantages a network system could offer them and their students: 1) all software and data files would be stored in a central file server, 2) a menu system would allow access to whatever programs the students or teachers chose,

and 3) one high-speed printer would handle all document hard copies.

Then, the core group examined software soon available for the network. There was a comprehensive basic skills package from Computer Systems Research which was matched to functional test competencies. There was a basic math skills package by Science Research Associates with a built-in management system for the teacher. There was a complete biology and earth science program series by IBM for students reading at grade level or above. And there were several thinking skills programs by Sunburst which were instructive as well as fun. Teachers used the software, then completed evaluation forms for a later selection process.

Finally, the group learned how to develop word processing activities for their content area classes. They became familiar with a rationale for interdisciplinary writing, participated in some writing activities themselves, brainstormed lists of writing activities for their disciplines, and used a model to design a sample activity for a class.

Most important, this core group became teacher-trainers. With the encouragement of the lab's site administrator, they became models for

other faculty members. The group used the computer lab, encouraged other faculty to use the lab, and participated actively in staff development activities.

Staff development activities were planned under one of several conditions: 1) new software became available for preview and evaluation, 2) faculty groups needed time to plan curriculum using newly installed software, or 3) faculty were introduced to methods for integrating computer use with their content area curricula.

A majority of staff development activities took place during the school day. Activities involving a portion of the faculty were scheduled with paid substitutes, with teachers on planning time, or with administrators covering for the participating teachers. When the entire faculty would be involved, activities were scheduled on a rotating basis or during a scheduled inservice day.

Each workshop provided several short breaks so teachers would not be forced to stare bug-eyed at their computer screens for hours on end. (After all, we wouldn't ask that of students, would we?) Having snacks available during breaks provided extra motivation and opportunities for informal sharing. Core group members helped plan

activities, occasionally led activities, and always were present to help less experienced faculty learn the basic operations of new software and equipment.

By the end of the lab project's second year, over half of the faculty (17 teachers) were regular computer users with some of their classes, and over three-fourths of the faculty (25 teachers) were occasional computer users. In faculty surveys conducted after each staff development activity, teachers consistently mentioned the value of the time they spent away from their teaching schedules to plan for computer activities. The following comments came from such surveys:

Science teacher: "My time is more valuable than an hourly stipend to spend Saturdays and vacation days in inservice. Thanks for having this during school time."

English teacher: "We don't often have the opportunity to interact professionally with our colleagues outside the department. This workshop has given me a chance to get to know other teachers and their teaching needs better."

Math teacher: "Not only was the food good at this workshop, I was able to plan how I would use

SRA MATH with my classes. I can't think of when I would find that time otherwise."

Music teacher: "I never thought we [music teachers] would be using the computers to do composition activities. This inservice has convinced me to schedule time for music reports in the lab."

Social studies teacher: "COVERMAKER will give my students a welcome change of pace on 'Current Events Day'. I'm looking forward to their reactions."

Staff development activities had largely contributed to the teachers' willingness to use computers regularly to support their content area assignments. Deliberate involvement of faculty members as models provided an atmosphere in which teachers were not as hesitant to ask questions, to assume the role of "learner", or to explore the applications of technology to their disciplines.